

TRAFFIC SAFETY GRANT CONCEPT

PROJECT TITLE: **Automated Collision Analysis and Tracking--GIS** **AGENCY:** **Anytown**

PROBLEM STATEMENT:

Anytown collision experience over the past three years has been:

Collision Type	1999				2000				2001			
	Collisions		Victims		Collisions		Victims		Collisions		Victims	
Fatal												
Injury												
	Fatal	Injury	Killed	Injured	Fatal	Injury	Killed	Injured	Fatal	Injury	Killed	Injured
Alcohol Involved												
Speed Related												
Pedestrians												
Pedestrians < 15												
Bicyclists												
Bicyclists < 15												

Office of Traffic Safety rankings for 2000 indicate:

Ranking Category	Per 1000 Vehicle Miles Traveled (VMT)		Per 1000 Population	
Collisions	Statewide	Population Group	Statewide	Population Group
Total Fatal and Injury Collisions				
Alcohol-Involved Collisions				
Speed-Related Collisions				
Victims Killed & Injured				
Pedestrians				
Pedestrians <15				
Bicyclists				
Bicyclists <15				
DUI Arrests	# of Arrests		% of licensed population	

(Briefly state the traffic safety problem to be addressed. Take into consideration changes or projected changes in population, traffic patterns, and other demographic dynamics that may affect traffic safety. Discuss Anytown's standing in OTS rankings for cities of like size. Provide a short description of how collision data is currently collected and analyzed.)

PERFORMANCE MEASURES:

Goal(s)

To identify, develop, and support programs that will enhance the systems and the staff expertise to enable agencies to improve the efficiency and accuracy of identification, analysis, and mitigation of critical collision locations.

Objectives

1. To identify (#) critical intersections and (#) critical street segments where collisions exceed established definitions of a high collision location by (date).
2. To develop a street centerline city/county map of (#) miles of streets including the geographical coordinates of each identifiable node and the ability to provide data to an automated mapping application by (date).
3. To provide a comprehensive electronic traffic records network including hardware, software, and network cabling or other linking media for the police department and the department of public works by (date).
4. To implement a software application to provide the means of producing a current report identifying the number and severity of collisions occurring at (#) critical locations by (date).
5. To implement software with the ability to correlate collisions with components such as roadway design, signal timing, visibility, traffic volumes, and other relevant factors not within the control of the drivers by (date).
6. To establish regular meetings between the police department and the department of public works to share the collected traffic related data by (date).
7. To enable the secure and confidential exchange of data between agencies by (date).

8. To ensure that the network system includes a relational database management system (RDMS) for storing and processing data for the following:
 - Collision—Files containing all fields included in the current collision report (CHP Form 555).
 - Arrests and Citations—Files containing records of all traffic law violations for which citations were issued or violators were arrested. The data in these files should include case dispositions and BAC levels when appropriate.
 - Roadway Location File—Using a geographical information system (GIS), a computer based application that references relevant geographic reference points such as latitude and longitude or points on a grid. The developed system must also provide for data output in the form of drawing or plotting software.
 - Highway Inventories—Files which typically include a traffic control device inventory (signs, signals, pavement markings) and an inventory of roads, including pavement type, alignment, curvature, capacity, and structure with specific location identifiers.
 - Operational Characteristics—A computer application providing the ability to track average daily traffic volumes, peak hour volumes, turning movements, speed limits and actual speeds. It may include descriptors of adjacent lane use and environmental conditions affecting traffic.
9. To increase the number of collision locations analyzed by (%) from the calendar base year total of (#) to (#) by (date).
10. To reduce the time that it takes to identify high collision locations, produce special and statistical analyses, and collision research by __% from the (200) base year of (#) (hours) and (#) (minutes) to (#) (hours) and (#) (minutes) by (date). The corresponding salary savings are to be tracked and reported.
11. To improve the Traffic Engineering Department's customer service by reducing the time it takes to produce and track collision reports and also reducing the time that it takes to analyze high collision locations by __% from the (200) base year average of (#) (hours) and (#) (minutes) to (#) (hours) and (#) (minutes) by (date). The corresponding salary savings are to be tracked and reported.
12. To reduce the time between an incident and its date of entry into the system by __% from the (200) base year average of (#) hours and (#) minutes to (#) hours and (#) minutes by (date). The corresponding salary savings will be tracked and reported.
13. To provide the ability to generate daily, weekly, monthly or annual activity reports by (date). Reports must be customizable and contain data relevant to traffic enforcement and/or traffic engineering activities.
14. To provide a software application with the means of producing current reports ranking collision locations by number and primary collision factor (PCF) by (date).
15. To train (#) of staff members in the usage and maintenance of the finalized version of the system software by (date).
16. To begin inputting citation data into the GIS implemented by the agency within (#) days of the citation issuance date by (date).
17. To begin tracking license plate numbers with the GIS database to help identify suspects in criminal and/or traffic related incidents by _____, 200__ and to inform OTS of any significant resulting arrests.

PROPOSED SOLUTION:

Anytown is proposing a cooperative traffic safety effort by the Anytown Traffic Engineering and Police Departments to efficiently pinpoint and analyze high collision locations and correlate these statistics to enforcement activity, traffic controls, or needed safety improvement. The project goals and objectives will be achieved through installation of a GIS based collision records and analysis system.

PROPOSED BEGINNING DATE: October 1, 2003**PROPOSED ENDING DATE:** September 30, 2004**PROPOSED BUDGET**

Budget Category	Federal Fiscal Year 1 10/1/03 to 9/30/04	Federal Fiscal Year 2	Project Total
Personnel Benefits _____ %			
Travel In-state	\$XXXX		\$XXXX
Contractual Services (If the services of a consultant are to be used, consultant services under contract with Anytown are to be included here.)	\$XXXX		\$XXXX
Non-Expendable Property (>\$5,000) (include tax and shipping)			
Other Direct Costs (<\$5,000) 2 IBM Compatible Computers 1 Large Format Color Plotter Automated Traffic Collision Citation Records System Software Secondary Site License (include tax and shipping)	\$XXXX XXXX XXXX XXXX		\$XXXX XXXX XXXX XXXX
Indirect Costs (see instructions)			
Project Total	\$XXXX		\$XXXX

BUDGET NARRATIVE

Provide a brief narrative explanation and justification of individual items of expenditures, which make of the amounts reflected in the proposed budget schedule, by cost category.

PERSONNEL:

N/A

TRAVEL:

In-State – Travel expenses associated with attendance at the annual OTS Summit.

CONTRACTUAL SERVICES:

A consultant will be hired to conduct all studies, data input, and all programming and hardware/software set up. Contractors will design and debug the systems before installation in the Police and Engineering Departments.

NON-EXPENDABLE PROPERTY:

N/A

OTHER DIRECT COSTS:

Two IMB Compatible Computers – share data and programs.

One large Format Color Plotter – (collision diagrams, plot streets and intersections).

Traffic Collision Citations Records System Software and Site Licenses necessary for operations of the system at two locations.

INDIRECT COSTS:

N/A